Mrs. Graf

UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Agricultural Engineering

M O N T H L Y N E W S L E T T E R

(Confidential information, for Bureau staff only.
Not released for publication)

Vol. 6. April 25, 1937 No. 8

Double Holidays

President Roosevelt has approved the closing of offices on May 31, and July 5, the days following the legal holidays of May 30, 1937 and July 4, 1937, which fall on Sunday this year. He has also approved the closing of offices all day December 24, 1937, the day preceding Christmas Day. This affects all Federal employees.

Six one-room experimental houses are to be erected at Athens, Ga. in cooperation with the University of Georgia. J. R. Dodge assisted J. W. Simons in planning the layout. Each house will be of a different material which might be suitable for use in farmhouse or tenant house construction.

The first will be a frame building of a type common in the South and will be used as a basis for comparison with the houses of other materials. The second will be of wood frame covered inside and out with galvanized sheet steel and with the stud spaces filled with treated cottonseed hulls for insulation. This house will have concrete piers and precast concrete sills and should be relatively fire-resistant and durable. The cottonseed hulls should provide sufficient insulation to make the house comfortable. The third house will be of wood frame construction with stucco on metal lath for the exterior and the back plastered on similar lath for the inside walls. This house will rest on a concrete slab in place of piers. The fourth house will be of precast concrete panels made from a light weight aggregate. These panels have been designed to use a minimum of material and should prove easy to cast and erect. As one of the objections to concrete for home construction has been the cost of the forms it was felt that precast units or panels might solve the problem as one or two forms could be built and used over and over again. The fifth house will be covered with metal but slightly different in design from the insulated galvanized sheet steel house. The sixth house will be of steel frame construction with brick veneer or stucco finish.

- - -

The most recent conclusions from studies of oil burners were discussed April 19 by A. H. Senner and Morse Salisbury, Chief of the Radio Service, on the National Farm and Home Hour program. Since the first of the year the Department has distributed nearly 5000 copies of Circular 406,

Oil Burners for Home Heating, practically all of them in response to requests. The bureau has ordered a reprint of the circular.

Merrill Bernard, hydraulic engineer, has been appointed Chief of the River and Flood Division of the Weather Bureau. The appointment of an hydrologist rather than a meteorologist to head an important division is a new policy in the Weather Bureau. Mr. Bernard will put into effect a plan for providing each important river basin in the United States with an efficient and smooth-working river and flood service. The bureau has already organized the work in the Missouri and upper Mississippi basins and plans to establish an improved service soon in Pennsylvania.

****

Thin Gray Lines

Complaints have come to the Editorial and Information Division about thin, gray carbon copies of manuscripts sent out for criticism -- pages that look like this paragraph. Such kicks are probably as old as carbon paper, but they deserve attention. Even if it is necessary to type a manuscript twice to get the desired number of strong carbons, the work will pay returns in more thoughtful consideration by readers. Fresh sheets of carbon paper and clean type on the machines should come first.

* * * * *

A comprehensive bibliography on land drainage compiled by Dorothy W. Graf, bureau librarian, has just been issued. The compilation lists nearly 3,000 articles, bulletins, pamphlets and books.

* * * * *

An analysis of the work of the six CCC drainage camps for Missouri shows a commercial value of the work completed during the period from July 1, 1935 to December 31, 1936, of $1,508,700. The cooperation furnished by the counties and local drainage organizations totaled $431,200. The difference of $1,077,500 is a direct saving in drainage taxes to the counties and drainage districts. In this period the six camps maintained 378 miles of ditches and levees that required 9,500,000 cubic yards of excavation and cleared of trees and brush 558 miles of ditches and 154 miles of levees.

- - - - -

Up to December 31, 1936, the five drainage camps in Iowa had done work worth $1,056,000. Of this $248,000 was furnished by counties and local drainage organizations. The saving to the counties and drainage districts is the difference or $800,000, a gain brought about by 199,700 man-days of work. This shows an average value of work done by men enrolled in the camps of a little more than $4.00 per man-day.

- - - - -

F. E. Staebner left Washington April 21 to supervise the gathering of the strawberry crop on the supplemental irrigation experiment at Willard, N. C.

- - - - -

The Divisions of Drainage and Structures are cooperating in inspecting silos in Minnesota, Wisconsin, Iowa, and South Dakota, to determine the extent of acid damage to the concrete work. The inspection will be made by D.G. Miller and Philip W. Manson.

The Central District Drainage Camps in March resumed dragline operations on many excavation projects on which activity was suspended during the winter. As a result, a total yardage of 1,198,312 is reported for the month, an amount approximately a quarter million yards greater than reported for the same month a year ago. Other production figures reported for the camps, in addition to excavation, are as follows: 9,120,513 square yards of clearing, 20,810 lineal feet of tile reconditioning, and 11,122 man-days used on structural and miscellaneous work. A total of 99,305 man-days were used during the month. Local cooperation furnished during this period amounted to $78,000.

- - -

State meetings for superintendents and engineers of the drainage camps were held at Purdue University on April 7 to 10 for the Indiana camps and at Missouri University on April 15 to 17, for the Missouri Camps. In each case, the programs were arranged and sponsored by the Agricultural Engineering Departments of the state Universities, with the assistance of H. G. Edwards and Clark E. Jacoby, Drainage Inspectors for the respective states.

* * * *

M. R. Lewis spent the greater part of March in the Dakotas on water conservation work. The last legislature in North Dakota created a Water Conservation Commission with broad authority to investigate and construct all sorts of water conservation projects and appropriated $112,500 for its work. One of the earliest statements by the Commission was that for the present its policy will be to exert every effort toward the utilization of waters now available. Another policy is to assist individual farmers and small cooperative groups in the irrigation of their own lands, with special emphasis on projects which can be completed this season. Mr. Lewis worked closely with the commission on these matters. In South Dakota the State Planning Board, under a grant from the National Resources Committee, is planning a preliminary study of water conservation projects with special reference to small irrigation schemes and stock-water dams.

- - -

To work up a basis for cooperative studies on the duty of water on lands in the vicinity or Ord, Nebr., Leslie Bowen, in company with Carl Rohwer, made a trip to that locality and conferred with representatives of the Nebraska Experiment Station. The droughts of recent years have accentuated the need for irrigation and in order to supplement the rainfall (averaging 24 inches per annum), irrigation by means of gravity ditches is planned, and construction of canals is already under way. Water will be taken from the North Loup River. It is expected that 35,000 to 40,000 acres of fertile and reasonably level land will be irrigated.

- - -

R. L. Parshall reports that the Parshall measuring flume is now used extensively in the Arkansas Valley and in the South Platte Valley from Denver to Julesburg. Two canal companies serving more than 35,000 acres are planning to equip their entire systems with this flume. As evidence of the adaptability of the Parshall flume to conditions in Peru, Senor Enrique Gongora Pareja, of Lima, writes that while in charge of maintenance of the Imperial Irrigation Project (20,000 acres near Caneta, Peru) he installed more than 800 of them and that they have greatly facilitated the equitable distribution of water.

In connection with the project on storage of water underground, Dean C. Muckel reports that the Los Angeles County Flood Control District made an interesting test on its spreading grounds on San Antonio Creek cone, near Upland, Calif. Dynamite was used in holes punched 3 to 4 feet deep and about 5 feet apart to loosen the bed of the stream channel. The district's measurements showed that the percolation rate was increased from 3 to 18 acre-feet per acre per day.

- - -

Methods used by representatives of the Soil Conservation Service in taking silt samples from the bottom of Medina Lake, near Austin, Tex, were observed by Harry G. Nickle. About 35 samples were turned over to Mr. Nickle and tested by him at the Austin laboratory for determination of volume-weight relation, complete mechanical analysis and specific gravity. Mr. Nickle also made hydrometer and sieve analyses and determinations of specific gravity on soil samples of proposed dam material taken near Huntsville, Texas. Test cylinders of these soils were made to determine density under pressure.

- - -

A talk on "Forest and Vegetative Cover Influence upon Snow Retention" was given by R. A. Work before the Agricultural Council of the Pacific Northwest Advisory Board in Portland, Oregon. Mr. Work also talked on "Forecasting the Irrigation Water Supply by Snow Survey" before the Institute of Irrigation Agriculture of the American Farm Bureau Federation at Corvallis, Oreg.

* * *

R. M. Merrill spent April 12 and 13 at Moorestown, N.J. conferring with Frank Irons and others on present and future plans for Japanese beetle and corn borer work. He spent the rest of the week at Washington discussing matters relative to pest control problems.

- - -

The possibility of mechanically thinning beets, thus lowering the highest peak labor load in sugar beet raising, has been studied by E. M. Mervine and S.W. McBirney for 3 years and is now drawing attention from the sugar companies. Mechanical thinning is an extension of mechanical blocking, which the industry has adopted quite generally, and now the sugar companies are encouraging more field trials of this experimental process.

- - -

W. R. Humphries recently made a trip to Long Island, N.Y. in connection with fertilizer placement studies with potatoes.

- - -

The Division of Mechanical Equipment is collecting material for a history of the mechanical development of the agricultural tractor. Any literature, pictures, advertisements, booklets or other material dealing with early tractor development, steam or gasoline, will be grist for this history. Mr. Humphries is now compiling the first draft.

- - -

An experimental drill for applying fertilizer to pastures and hay crops is being constructed under the supervision of G.A.Cumings. A large acreage of pasture and other soil conserving crops are now receiving applications of commercial fertilizer and experiments will be started this season to determine how the fertilizer should be applied. The experimental machine will place the fertilizer in drills at different distances apart and at different depths in the soil. L.G. Schoenleber and W. H. Redit are engaged on fertilizer placement experiments with cotton and tobacco in the southern states.

* * *